

Investigation

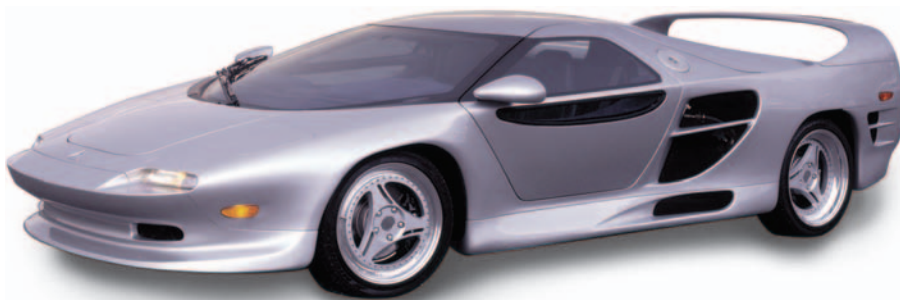
2

Comparing Ratios, Percents, and Fractions

You used ratios, fractions, percents, and differences to compare quantities in Investigation 1. Now, you will develop strategies for choosing and using an appropriate comparison strategy. As you work through the problems, you will make sense of the statements in the *Did You Know?*

Did You Know?

- In 2001, 20.8% of all radio stations in the United States had country music as their primary format, while only 4.5% had a Top-40 format.
- For the first 60 miles of depth, the temperature of Earth increases 1°F for every 100 to 200 feet.
- In 2000, cancer accounted for about $\frac{1}{5}$ of all deaths in the United States.
- In 2001, silver compact cars and silver sports cars outsold black cars by a ratio of 5 to 3.



For: Information about any of these topics
Web Code: ane-9031

2.1

Mixing Juice

Julia and Mariah attend summer camp. Everyone at the camp helps with the cooking and cleanup at meal times.

One morning, Julia and Mariah make orange juice for all the campers. They plan to make the juice by mixing water and frozen orange-juice concentrate. To find the mix that tastes best, they decide to test some mixes.

Mix A

2 cups concentrate	3 cups cold water
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Mix B

5 cups concentrate	9 cups cold water
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Mix C

1 cup concentrate	2 cups cold water
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Mix D

3 cups concentrate	5 cups cold water
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Problem 2.1 Developing Comparison Strategies

- A. Which mix will make juice that is the most “orangey”? Explain.
- B. Which mix will make juice that is the least “orangey”? Explain.
- C. Which comparison statement is correct? Explain.
 $\frac{5}{9}$ of Mix B is concentrate. $\frac{5}{14}$ of Mix B is concentrate.
- D. Assume that each camper will get $\frac{1}{2}$ cup of juice.
 1. For each mix, how many batches are needed to make juice for 240 campers?
 2. For each mix, how much concentrate and how much water are needed to make juice for 240 campers?
- E. For each mix, how much concentrate and how much water are needed to make 1 cup of juice?

ACE Homework starts on page 24.